

Claims

1. Method of coating of a device with a substance comprising the steps of:
 - (a) contacting said device into a solution of said substance, and
 - (b) drying said device while being in contacting said solution.
- 5 2. The method of claim 1, further comprising the step of removing volatile components from said solution of said substance.
- 10 3. The method of claim 2, wherein said removal step is performed before, simultaneously, or after step (b).
4. The method of claim 1, 2 or 3, wherein said substance is a pharmaceutically active substance.
- 15 5. The method of claim 4, wherein said pharmaceutically active substance is a protein, peptide, polysaccharide or a glycolipid or a small molecule.
- 20 6. The method of claim 5, wherein said pharmaceutically active substance is immobilised in an inorganic or organic bioresorbable material.
7. The method of claim 5, wherein said pharmaceutically active substance is a dissolved osteoinductive protein.
- 25 8. The method of claim 1, 2 or 3, wherein said substance comprises non-active ingredients.
9. The method of claim 1, 2 or 3, wherein said substance comprises calcium phosphates.
- 30 10. The method of any of the preceding claims, wherein said drying step comprises isothermal drying.

11. The method of any of the preceding claims, wherein said coating of said device is performed while said device is received within its packaging container.
12. The method of any of the preceding claims, wherein said solution is an aqueous solution or an organic solvent.
- 5 13. The method of any of the preceding claims, wherein said solution is an acid aqueous solution.
- 10 14. The method of any of the preceding claims, wherein said solution contains an antioxidant.
- 15 15. The method of claim 14, wherein said antioxidant is methionin or its derivatives.
16. The method of any of the preceding claims, wherein said device is made of metal or metal alloy, preferably titanium or a titanium alloy.
17. The method of any of the preceding claims, wherein said device is a dental implant, or a coronary stent.
- 20 18. The method of any of the preceding claims, wherein step (a) comprises:
 - (a1) providing a packaging container for said device;
 - (a2) filling said coating solution into said container;
 - (a3) inserting said device into said filled container;wherein the order of steps (a2) and (a3) can be reversed.
- 25 19. The method of claim 18, further comprising the steps of:
 - (A) applying a hydrophobic material onto said inner surfaces of said container, and
 - (B) heat-curing said applied material to form a baked-in layer on said inner surfaces of said container;wherein said coating influences the distribution coefficient of the substance to be coated on said device between said container and said device.

20. The method of claim 19, wherein said hydrophobic material is silicone or PTFE.
21. The method of claim 19 or 20, wherein step (A) comprises siliconizing said inner surfaces using silicone emulsion.
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22. The method of claim 18, said packaging container comprising a receptacle for receiving said device to be coated, said receptacle being adapted in size and shape to the size and shape of said device.
- 10 23. The method of claim 22, wherein the inner surface of said receptacle is coated.
24. The method of any of the preceding claims, further comprising the step of applying a vacuum for removing air bubbles, prior to step (b).
- 15 25. The method of any of the preceding claims, wherein step (b) is performed at about 100 hPa at ambient temperature.
26. The method of any of the preceding claims, wherein step (b) is performed using an ice-condenser.
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27. The method of any of claims 18 to 26, further comprising the step of evacuating said container, venting it with nitrogen, and closing said container under nitrogen.
28. Packaging container for a device, said packaging container being adapted such
25 that said device is coatable directly within said packaging container.
29. The packaging container according to claim 28, said packaging container being adapted in size and shape to the size and shape of said device.
- 30 30. The packaging container according to claim 28 or 29, wherein the inner surface of
said packaging container is coated.
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31. The packaging container according to claim 30, wherein the inner surface of said packaging container is coated with a layer of an inert, repelling (hydrophobic/or hydrophilic), material.
- 5 32. The packaging container according to claim 28, comprising a receptacle for receiving said device to be coated, said receptacle being adapted in size and shape to the size and shape of said device.
- 10 33. The packaging container according to claim 32, wherein the inner surface of said receptacle is coated.
34. The packaging container according to claim 33, wherein the inner surface of said receptacle is coated with a layer of an inert, repelling (hydrophobic/or hydrophilic), material.
- 15 35. The packaging container according to claim 31 or 34, wherein the hydrophobic material is a silicone.
- 20 36. The packaging container according to claim 31 or 34, wherein the hydrophobic material is PTFE.
37. The packaging container according to any of claims 32 to 36, wherein said receptacle is coaxially located within a container housing.
- 25 38. The packaging container according to claim 37, wherein said container housing comprises an opening for receiving said device and said coating substance, and a bottom portion being located opposite to said opening, wherein said receptacle comprises an opening for receiving said device and said coating substance, and a bottom portion being located opposite to said opening, said opening of said housing and said opening of said receptacle being aligned with each other, and wherein said receptacle is attached at its bottom portion to the bottom portion of said housing.
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39. The packaging container according to claim 38, wherein the opening portion of said receptacle is spaced from the opening portion of said housing.

40. The packaging container according to any of claims 28 to 39, being made of glass.

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41. Method of coating the inner surfaces of a packaging container for a device, preferably implants, to be coated by a substance, comprising the steps of:

(A) applying a hydrophobic material onto said inner surfaces of said container, and

10 (B) heat-curing said applied material to form a baked-in layer on said inner surfaces of said container;

wherein said coating influences the distribution coefficient of the substance to be coated on said device between said container and said device.

15 42. The method of claim 41, wherein said hydrophobic material is silicone or PTFE.

43. The method of claim 41 or 42, wherein step (A) comprises siliconizing said inner surfaces using silicone emulsion.

20 44. Coated device, obtainable by a method according to any of claims 1 to 27.

45. The coated device of claim 44, wherein said device is an implant.

46. The coated device of claim 45, wherein said implant is a dental implant.

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47. The coated device of claim 45, wherein said implant is a stent, a nail, a cage, a screw, or a plate, respectively.

30 48. Use of said method of coating a device according to any of claims 1 to 27 for improving the homogeneous distribution of the coating on the device.

49. Use of said method of coating a packaging container according to any of claims 41 to 43 for improving and/or controlling the distribution coefficient of the substance to be coated on said device between said container and said device.

50. A kit comprising the device which is obtainable by the method of any one of claims 1 to 27.